

**Remarks**

The Office Action mailed December 14, 2006 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-6 are now pending in this application. Claims 1-6 stand rejected. Claim 1 has been amended.

The rejection of Claim 1 under 35 U.S.C. § 102(b) as being anticipated by Fernandez et al. (U.S. Patent 5,592,031) (hereinafter referred to as “Fernandez”) is respectfully traversed.

Fernandez describes a pulse-echo system for medical echography. Specifically, Fernandez describes a system including a low series impedance switching channel that includes a pair of high voltage capacitors ( $C_1$ ) in series with a pair of rectifying groups ( $GR_1$  and  $GR_2$ ) that are connected in opposition and whose conduction status is activated by forced injection from a conventional low voltage unidirectional switch (CBT) to provide for a logic control from digital circuits. Specifically, “[t]he closing of the switch CBT gives rise to the passing of a continuous current through a central branch and  $GR_1$  and  $GR_2$  from a low voltage source  $V_p$ ....” (Column 3, lines 28-31) Accordingly, Fernandez describes a low voltage source that powers high voltage switches. However, Fernandez is silent with regard to the circuitry of the low voltage source. Specifically, Fernandez does not describe or suggest a bias power source generating circuit for generating a bias power source for an analog switch from a transmitter power source, wherein the bias power source generating circuit includes at least one diode and at least one capacitor.

Claim 1 recites an ultrasonic diagnostic apparatus for transmitting ultrasonic signals from ultrasonic transducers toward a subject to be examined, and receiving reflected waves of said ultrasonic signals for display, wherein the ultrasonic diagnostic apparatus comprises “an analog switch for switching ultrasonic transducers for transmission of said ultrasonic signals and reception of said reflected waves . . . a transmitter power source for supplying a high

voltage to a transmitter circuit for causing said ultrasonic transducers to drive said ultrasonic signals . . . a bias power source generating circuit for generating a bias power source for said analog switch from said transmitter power source, wherein said bias power source generating circuit includes at least one diode and at least one capacitor.”

Fernandez does not describe or suggest an ultrasonic diagnostic apparatus as recited in Claim 1. More specifically, Fernandez does not describe or suggest an ultrasonic diagnostic apparatus including a bias power source generating circuit that includes at least one diode and at least one capacitor. Rather, in contrast to the recitations of Claim 1, Fernandez merely describes a low voltage source that powers high voltage switches. However, Fernandez does not describe the circuitry recited in Claim 1.

Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Fernandez.

For the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claim 1 be withdrawn.

The rejection of Claims 1, 2, 4, and 6 under 35 U.S.C. § 102 (e) as being anticipated by Barnes et al. (U.S. Patent 6,795,374) (hereinafter referred to as “Barnes”) is respectfully traversed.

Barnes describes a method and system for controlling a bias voltage for use with an electrostatic transducer. Specifically, Barnes describes an analog switch 14 that is configured to switch ultrasonic transducers to accommodate the transmission of ultrasonic signals and the reception of reflected waves. Barnes further describes a transmitter power source 100 that supplies a high voltage to a transmitter circuit to enable the ultrasonic transducers to drive the ultrasonic signals. Further, Barnes describes a power source configured to generate power for the analog switch 14 from the transmitter power source 100. Notably, as illustrated in Figure 4, the power source described in Barnes does include at least one diode and at least

one capacitor. Rather, Barnes describes a power source that includes a configuration of resistors and capacitors.

Claim 1 recites an ultrasonic diagnostic apparatus for transmitting ultrasonic signals from ultrasonic transducers toward a subject to be examined, and receiving reflected waves of said ultrasonic signals for display, wherein the ultrasonic diagnostic apparatus comprises “an analog switch for switching ultrasonic transducers for transmission of said ultrasonic signals and reception of said reflected waves . . . a transmitter power source for supplying a high voltage to a transmitter circuit for causing said ultrasonic transducers to drive said ultrasonic signals . . . a bias power source generating circuit for generating a bias power source for said analog switch from said transmitter power source, wherein said bias power source generating circuit includes at least one diode and at least one capacitor.”

Barnes does not describe or suggest an ultrasonic diagnostic apparatus as recited in Claim 1. More specifically, Barnes does not describe or suggest an ultrasonic diagnostic apparatus including a bias power source generating circuit that includes at least one diode and at least one capacitor. Rather, in contrast to the circuitry recited in Claim 1, Barnes describes a power source that includes a configuration of resistors and capacitors.

Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Barnes.

Claims 2, 4, and 6 depend from independent Claim 1. When the recitations of Claims 2, 4, and 6 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 2, 4, and 6 likewise are patentable over Barnes.

For the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 1, 2, 4, and 6 be withdrawn.

The rejection of Claims 3, 5, and 6 under 35 U.S.C. § 103 (a) as being unpatentable over Barnes in view of Sato et al. (U.S. Patent 5,469,484) (hereinafter referred to as “Sato”) is respectfully traversed.

Barnes is described hereinabove.

Sato merely describes a solid state imaging device that includes a booster circuit 16 to provide a desirable substrate voltage  $V_{SUB}$  to the imaging device. Notably, booster circuit 16, as illustrated in Figure 2 does not include at least one diode and at least one capacitor. Rather, Sato merely describes a booster circuit having a pair of capacitors and a plurality of switches.

Claims 3, 5, and 6 depend from Claim 1, which recites an ultrasonic diagnostic apparatus for transmitting ultrasonic signals from ultrasonic transducers toward a subject to be examined, and receiving reflected waves of said ultrasonic signals for display, wherein the ultrasonic diagnostic apparatus comprises “an analog switch for switching ultrasonic transducers for transmission of said ultrasonic signals and reception of said reflected waves . . . a transmitter power source for supplying a high voltage to a transmitter circuit for causing said ultrasonic transducers to drive said ultrasonic signals . . . a bias power source generating circuit for generating a bias power source for said analog switch from said transmitter power source, wherein said bias power source generating circuit includes at least one diode and at least one capacitor.”

Neither Barnes nor Sato describe or suggest an ultrasonic diagnostic apparatus as recited in Claim 1. More specifically, neither Barnes nor Sato describe or suggest an ultrasonic diagnostic apparatus including a bias power source generating circuit that includes at least one diode and at least one capacitor. Rather, in contrast to circuitry recited in Claim 1, Barnes describes a power source that includes a configuration of resistors and capacitors, and Sato merely describes a booster circuit having a pair of capacitors and a plurality of switches.

Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Barnes in view of Sato.

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Claims 3, 5, and 6 depend from independent Claim 1. When the recitations of Claims 3, 5, and 6 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 3, 5, and 6 likewise are patentable over Barnes in view of Sato.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 3, 5, and 6 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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